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Scientific Knowledge about Poultry Broiler Farming in Barabanki District of Uttar Pradesh

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ABSTRACT

The present investigation was carried out to study the scientific knowledge about broiler farming among poultry farmers in Barabanki district of Uttar Pradesh. Fifteen poultry farmers were selected randomly from each block, making a total sample size of 75. To measure the knowledge level of respondents with regard to scientific broiler farming practices, a structured pretested interview schedule was developed consisting of 72 objective type questions related to seven major areas like housing, brooding, feeding, bio-security and disease control, finance, marketing and poultry insurance. Every correct answer was given score one and incorrect score zero. The total knowledge score of the respondent was obtained by adding scores of all the correct answers out of 72 questions. The lowest score that a respondent could obtain was zero and the highest was 72. On the basis of overall knowledge score, the respondents were classified into three categories as low, medium and high on the basis of equal interval between maximum and minimum knowledge score. The study revealed that all the small poultry farmers had medium level of scientific knowledge about feed and feeding management practices, housing management practices and brooding management practices (in overwhelming majority), while all the large poultry farmers had high level of scientific knowledge about housing management practices, breed selection and identification of quality chicks, feed and feeding management practices and poultry insurance. All the medium poultry farmers were found to have medium level of scientific knowledge about bio-security and disease control practices, finance, marketing and poultry insurance, while overwhelming majority of them (93.75%) were having high level of knowledge about feed and feeding management practices. Majority of medium poultry farmers were found to possess medium level of knowledge about brooding management, breed selection and identification of quality chicks while, high level of knowledge about housing management practices. Majority of them had high level of knowledge about feed and feeding management practices. Further, comparison of knowledge level about scientific broiler farming among the different categories of poultry farmers using one way ANOVA was also done and the results show that small, medium and large poultry farmers were found to differ significantly at 1per cent level of significance ($p<0.01$) with respect to knowledge about scientific broiler farming practices.

Keywords - Broiler-farming, scientific-knowledge, brooding, feeding, bio-security, disease-control.

INTRODUCTION

The poultry industry in India is made of two sectors, laying hens for egg and poultry broiler for meat purpose. Indian broiler production is highly organized, with the formal sector contributing nearly 85 per cent of the total output. The broiler farming is concentrated mainly in the states Tamil Nadu, Andhra Pradesh, Maharashtra, Karnataka, Punjab, Haryana, Delhi and West Bengal; however, commercial poultry broiler farming in Uttar Pradesh is still in growing phase. So, without utilization of scientific knowledge about broiler farming proper running of poultry farm is impossible. India is the second largest egg producer and third largest broiler chicken producer in the world with production estimates of 65,000 million (2.8 million tonnes) eggs and 3 million tonnes of broiler meat per year (BAHS,2014). The Indian Nutritional Academy, Hyderabad has suggested 11.00 kg chicken meat consumption while, national availability is 2.20 kg and for U.P. it is 0.987 kg per head per year (Animal Husbandry U.P., 2012). Poultry Broiler farming, at commercial level is somewhat new in Uttar Pradesh so, the present study was conducted to know the scientific knowledge about poultry broiler farming of the respondents.

METHODOLOGY

Poultry farmers who are practising broiler farming for at least one year with flock size of 250 birds and above, per batch (at least three batches) were enlisted block wise. Out of these enlisted poultry farmers, fifteen were selected randomly from each block. Thus, 75 poultry

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farmers from five blocks were selected. In the present study, the knowledge level of poultry farmers about scientific broiler farming practices was measured as the amount of understood information held by poultry farmer with respect to recommended practices of scientific broiler farming. To measure the knowledge level of respondents with regard to scientific broiler farming practices, a structured, pretested interview schedule was developed consisting of 72 objective type questions related to housing, brooding, feeding, and biosecurity and disease control, finance, marketing and poultry insurance. Every correct answer was given a score of one and for incorrect a score of zero. The total knowledge score of the respondent was obtained by adding scores of all the correct answers out of 72 questions. The lowest score, that a respondent could obtain, was zero and the highest was 72. On the basis of overall knowledge score, the respondents were classified into three categories as low, medium and high on the basis of equal interval between maximum and minimum knowledge score. In order to know significant differences among categories of poultry farmers, one way ANOVA was applied.

RESULTS AND DISCUSSION

Extent of knowledge of poultry farmers with respect to various scientific broiler farming practices

The data given in Table 1 reveal that all the small poultry farmers (100 %) had medium level of knowledge about scientific broiler housing management practices, while among medium poultry farmers, majority of them (68.75 %) had high level of knowledge about scientific broiler housing management practices, followed by medium (31.25%). With respect to large poultry farmers, all the respondents (100 %) had high level of knowledge about scientific broiler housing management practices. Pooled data indicates that overwhelming majority of poultry farmers (81.33 %) had medium knowledge level, followed by high (18.67 %). None of the small, medium and large poultry farmers were found to have low level of knowledge. The mean knowledge score about housing management practices of small, medium and large poultry farmers were 8.32, 11.06 and 13.33 respectively. Pooled data mean knowledge score was 9.10. Swu *et. al.* (2011) also reported somewhat similar findings as medium and large poultry farmers had high knowledge about housing practices, while Babu *et al.* (2013) found that 48.33 per cent poultry farmers had medium level of knowledge about scientific housing practices.

The data given in table 1 also revealed that 53.58 per cent of small poultry farmers had medium level of knowledge about breed selection and identification of quality chicks, followed by low level of knowledge (46.42%), while majority of medium poultry farmers (68.75%) had medium level of knowledge about breed selection and identification of quality chicks, followed by high knowledge level (31.25%). Almost a similar finding was obtained by Jat and Yadav (2012). All the large poultry farmers had high level of knowledge about housing management practices, breed selection and identification of quality chick, feed and feeding management practices and poultry insurance. The mean knowledge score about breed selection and identification of quality chicks among small, medium and large farmers were 1.53, 2.31 and 3, respectively. Pooled data indicates that 54.67 per cent poultry farmers had medium level of scientific knowledge about breed selection and identification of quality chicks, followed by low (34.66%) and high (10.67%) with pooled mean score 1.76. The data given in table 1 depict that a huge majority of small poultry farmers (96.43%) had medium level of knowledge about scientific brooding management practices, followed by low (3.57 %), while there was no respondent having a high level of knowledge. In the medium poultry farmers category, majority of them (62.5%) belonged to medium level of knowledge about brooding management practices, followed by high (37.5%). None of the poultry farmer had low level of knowledge in this category. Among large poultry farmers, majority of them (66.67%) had high level of knowledge, while only 33.33 per cent had fallen in medium level of knowledge about brooding management practices. The mean knowledge score about brooding management practices among small, medium and large category poultry farmers were 4.57, 6.36 and 7.66 respectively. The pooled data indicates that overwhelming majority of poultry farmers (86.66%) had medium level of knowledge about brooding management practices, followed by high (10.66%) and low level (2.66%) and pooled mean knowledge score was 5.08.

Table 1 further, reveals that there was no poultry farmer with low knowledge level about feed and feeding management practices in any category of poultry farmers. In small poultry farmers category, all the farmers had medium knowledge level about scientific feed and feeding management practices, and no poultry farmer belonged to high level of knowledge. Among medium poultry farmers, an overwhelming majority (93.75 %) had high knowledge level, followed by medium (6.25 %) knowledge level, where as all the large poultry farmers were found to have high level of knowledge. Mean knowledge score among small, medium and large poultry farmers were 6.8, 9.31 and 11 respectively. The pooled data indicates that majority of respondents (76%) belonged to medium level of knowledge, and the rest 24 per cent had high level of knowledge with pooled mean

knowledge score of 7.51.

Table 1 revealed that majority of the small poultry farmers (62.5%) had medium level of knowledge of bio-security and disease control practices, and the rest 37.50 per cent had low level of knowledge. Among medium poultry farmers, all the respondents had medium level of knowledge, while majority of large poultry farmers (66.67%) had medium level of knowledge, followed by high level of knowledge (33.33%). The mean knowledge score among small, medium and large poultry farmers were 5.13, 7.75 and 9, respectively. The pooled data indicates that majority of poultry farmers (70.67%) had medium level of knowledge about bio-security and disease control practices, followed by low level of knowledge (28%) and negligible 1.33 per cent belonged to high level of knowledge, with the pooled mean knowledge score 5.84. Table 1 also reveals that majority of the respondents (76.69%) had medium level of knowledge of finance and rest 23.31 per cent had low level of knowledge in small poultry farmers' category. All the medium poultry farmers had medium knowledge about finance.

Among large poultry farmers, majority (66.67%) had medium level of knowledge and remaining 33.33 per cent had high level of knowledge about finance. The mean knowledge score about finance among small, medium and large poultry farmers were 1.79, 2.75 and 3.3 respectively. The pooled data indicates that an overwhelming majority of poultry farmers (88.33%) had medium level of knowledge, while 17.33 per cent had low level of knowledge and only 1.34 per cent had high level of knowledge.

These results were in line with Bhuyian *et al.* (2013). Pooled mean knowledge score was 2.05. Table 1 reveals that majority of small poultry farmers (64.28%) had low level of knowledge about marketing and the rest 35.72 per cent belonged to medium level of knowledge. All the medium poultry farmers had medium level of knowledge about marketing, while majority of large poultry farmers (66.67%) had high level of knowledge, followed by medium level of knowledge (33.33%). The mean knowledge score of small, medium and large poultry farmers were 1.96, 4, and 4.67 respectively. The pooled data indicates that more or less equal percentage of poultry farmers were found to belong to medium (49.33%) and low (48%) levels of knowledge, and only 2.67 per cent had high level of knowledge with pooled mean knowledge score of 2.5. Table 1 reveals that the highest percentage of small poultry farmers (58.93%) had medium level of knowledge of poultry insurance, while 41.07 per cent had low level of knowledge. All the medium poultry farmers had medium knowledge about poultry insurance, while all the large poultry farmers had high level of knowledge about poultry insurance. The mean knowledge score of small, medium and large poultry farmers were 1.6, 2.44 and 4 respectively. The pooled data indicates that majority of poultry farmers (65.33%) had medium level of knowledge and 30.66 per cent had low level of knowledge. Only 4 per cent had high level of knowledge about poultry insurance with pooled mean knowledge score of 1.88.

Table 1: Distribution of poultry farmers according to their knowledge level about scientific broiler farming practices

n=75

Knowledge level	Small (n=56)		Medium (n=16)		Large (n=3)		Pooled (n=75)	
	F	%	F	%	F	%	F	%
Housing management practices								
Low (up to5.33)	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Medium (5.33-10.66)	56	100	5	31.25	0.0	0.0	61	81.33
High (10.66-16)	0.0	0.0	11	68.75	3	100	14	18.67
Mean score	**8.32**		**11.06**		**13.33**		**9.10**	
Breed selection & identification of quality chick								
Low(up to1.33)	26	46.42	0.0	0.0	0.0	0.0	26	34.66
Medium(1.33-2.66)	30	53.58	11	68.75	0.0	0.0	41	54.67
High(2.66-4)	0.0	0.0	5	31.25	3	100	8	10.67
Mean score	**1.53**		**2.31**		**3**		**1.76**	
Brooding management								
Low (up to 3.33)	2	3.57	0.0	0.0	0.0	0.0	2	2.67
Medium (3.33-6.66)	54	96.43	10	62.5	1	33.33	65	86.66
High (6.66-10)	0.0	0.0	6	37.5	2	66.67	8	10.67
Mean score	**4.57**		**6.36**		**7.66**		**5.08**	
Feed and feeding management practices								
Low (up to 4.33)	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Medium (4.33-8.66	56	100	1	6.25	0.0	0.0	57	76
High (8.66-13)	0.0	0.0	15	93.75	3	100	18	24
Mean score	**6.80**		**9.31**		**11**		**7.506**	
Biosecurity and disease control practices								
Low (up to 4.67)	21	37.5	0.0	0.0	0.0	0.0	21	28
Medium (4.67-9.35)	35	62.5	16	100	2	66.67	53	70.67
High (9.36-14)	0.0	0.0	0.0	0.0	1	33.33	1	1.33
Mean score	**5.13**		**7.75**		**9**		**5.84**	
Finance								
Low (up to1.67)	13	23.21	0.0	0.0	0.0	0.0	13	17.33
Medium 1.67-3.35)	43	76.79	16	100	2	66.67	61	81.33
High (3.35-5)	0.0	0.0	0.0	0.0	1	33.33	1	1.34
Mean score	**1.79**		**2.75**		**3.33**		**2.05**	
Marketing								
Low (up to 2)	36	64.28	0.0	0.0	0.0	0.0	36	48
Medium (2- 4)	20	35.72	16	100	1	33.33	37	49.33
High (4-6)	0.0	0.0	0.0	0.0	2	66.67	2	2.67
Mean score	**1.96**		**4**		**4.67**		**2.5**	
Poultry insurance								
Low (up to1.67)	23	41.07	0.0	0.0	0.0	0.0	23	30.67
Medium (1.67-3.35)	33	58.93	16	100	0.0	0.0	49	65.33
High (3.35-5)	0.0	0.0	0.0	0.0	3	100	3	4
Mean score	**1.6**		**2.44**		**4**		**1.88**	

Overall knowledge level of poultry farmers

The data given in Table 2 reveals that majority of small poultry farmers (78.57 %) had medium level of overall knowledge about scientific broiler farming practices, followed by low (11.76 %) knowledge level and no respondent had high level. Similarly, majority of medium poultry farmers (62.5 %) had medium level of overall knowledge. None of the medium poultry farmers were found in low knowledge level category. Among large poultry farmers, 66.67 per cent respondents had high level of knowledge, and rest 33.33 per cent poultry farmers had medium level of knowledge. The mean knowledge score of small, medium and large poultry farmers were 31.71, 46, and 56 respectively. The mean score of overall knowledge of poultry farmers was 35.73. Further, comparison of knowledge level about scientific broiler farming among the different categories of poultry farmers using one way ANOVA was also done and the results show that small, medium and large poultry farmers were found to differ significantly at 1% level of significance ($p<0.01$) with respect to knowledge about scientific broiler farming practices. These findings were opposite to Razzaq *et. al.* (2011) who reported that majority of the poultry farmers' knowledge fall between the range of low and average level of knowledge while, Babu (2013) reported a high significant ($p<0.01$) difference between large and small poultry farmers, and large and medium poultry farmers, with respect to knowledge about scientific broiler farming practices.

Table 2: Distribution of poultry farmers according to their overall knowledge

Overall Knowledge level	Small (n=56)		Medium (n=16)		Large (n=3)		Pooled (n=75)	
	f	%	f	%	f	%	f	%
Low (0-24)	12	21.43	0	0.00	0	0.00	12	16
Medium(24-48)	44	78.57	10	62.5	1	33.33	55	73.33
High(48-72)	0.0	0.0	6	37.5	2	66.67	8	10.67
Mean score ± SE	**31.71 ± 0.848[a]**		**46 ± 0.842[b]**		**56 ± 1.732[c]**		**35.73 ± 1.059**	

CONCLUSION

Among the various scientific broiler farming practices, majority of poultry farmers had medium level of knowledge. Small, medium and large poultry farmers differ significantly in scientific knowledge about poultry broiler farming. There is need to improve the knowledge base of small poultry farmers in the area of breed selection and identification of quality chicks, bio-security and disease control, finance, marketing and poultry insurance. Medium poultry farmers should also pay attention on breed selection and quality chick identification, brooding management, bio-security, finance, marketing and poultry insurance.

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